

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	15989
<b>Description:</b> Crosstube Extrusion ( 407 fwd )	<b>Part Number:</b>	D6010-115
<b>Drawing:</b> D6010 Rev. A	<b>Qty:</b>	<del>20</del> 14

Step	Location	Procedure	By	Date	qty
1	EXPEDITING	Open W/O	SM	01.12.11	<del>20</del> 20
2	PURCHASING	Issue P/O: <u>2004012</u> a) Order as per Dwg D6010 b) Material: 2.250 x 0.320 wall 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) seamless alum tube c) Minimum ultimate tensile strength = 77 ksi d) Minimum tensile yield strength = 66 ksi e) Tolerance are per ASTM B210 (see details on Dwg D6010) f) <b>Material certification required</b>	U	01-12-12	20
3	RECEIVING	Receive and Inspect for transit damage <b>Ensure Material certification is attached</b>	FL	02.01.14	22
4	QC	Inspect Level 6 <b>Ensure Material certification comply to Dwg</b>	FL	02.07.02	14
5	FINISHING	Chemical conversion coat as per QSI 005 4.1	SS	02.07.02	14
6	STORES	Identify and Stock	SS	02-07-03	14
7	EXPEDITING	Close W/O Cost / part <u>360.34</u> <u>02/07/04</u> (14)	SM	02/07/04	

Rev	Date	Change	Revised By	Approved
A	01.08.17	New Issue	SM	SS

127.36

22.5 lbs e 25 lbs

500 lbs = 20 pcs

RELEASE

01.08.

8 bad

(22)?

275<sup>00</sup> 02

**Dart Aerospace Ltd**

Work Order:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Manuf / Design Mgr	Approval QC Inspector

NCR		WORK ORDER NON-CONFORMANCE						
DATE	STEP	Description of NC section A	Corrective Action Section B		Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial					

PAR#: \_\_\_\_\_ Fault Category: \_\_\_\_\_ DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**NOTE:** Date & initial all entries  
H:\Admin-QA\ISO\forms\w\oncB.doc

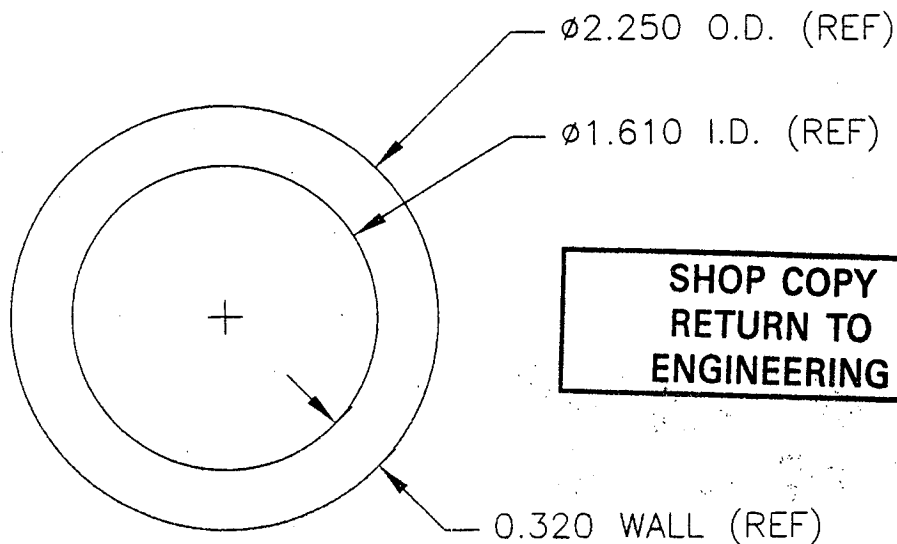
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



DESIGN [Signature]	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D6010	REV. A SHEET 1 OF 1
DATE 01.08.16		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	01.08.16	NEW ISSUE	

## SPECIFICATION CONTROL DRAWING

RELEASED  
01.08.17 [Signature]



WORK ORDER  
NO. 15989

CONTROLLED COPY

### NOTES

- 1) D6010-XXX CROSSTUBE  
LENGTH

WHERE XXX IS LENGTH IN INCHES  
EG. 115" LONG TUBE: D6010-115

- 2) MATERIAL: 2.250 OD x 0.320 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.  
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi  
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:  
O.D.:  $\pm 0.006$  MEAN ( $\pm 0.012$  INCLUDING OVALITY)  
WALL:  $\pm 0.015$  MEAN ( $\pm 0.032$  INCLUDING ECCENTRICITY)  
LENGTH: XXX  $+0.125/-0.000$   
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Dec 10, 2001  
07:39 am

Work Order No : 0015989  
Project Name : D6010-115  
Project For : WK15  
Work Order Type : Main  
Main WO Number :  
House Part Number : D6010-115  
Description : Crosstube Material  
Manufactured : Yes  
Amount Req'd : 20  
Amount Done : 0  
Start Date :  
Est Finish Date : 04-05-02  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Margin : 0.000%  
Actual Margin : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

# BA TUBES LIMITED

Studley Road, Redditch, Worcester B98 7HN, England  
Telephone (01527) 484500, Facsimile (01527) 484501



## Approved Certificate

BSEN ISO 9002 Registration No. FM 10669  
CAA Approved Reference No. DMAA 1218  
BAe Approval No. BAE/AG/30275/MAA

Customer Copy No. 94863/1

<b>Customer</b> DART AEROSPACE LIMITED 1270 ABERDEEN STREET HAWKESBURY ONTARIO CANADA K6A 1K7	<b>Your Order No</b> : 2004012 <b>Our Order No</b> : 81502/2 <b>Packing Note No</b> : 94083 <b>Date</b> : 27 Mar 2002 <b>Packages</b> : 1 CASE	<b>Other Tests Passed</b>
<b>Size / Description</b> SEAMLESS DRAWN TUBE 57.150MM O/D 8.130MM W/T 7075 Alloy Length - 3235.00 mm 127"	<b>Specification</b> 7075 T6 WW-T-700/7B	

No of Pieces	Nett Weight Lbs	Insp. Stamp R.A.R.	Tensile Test					Chemical Analysis %												H / 0gm
			Lot or Test No.	0.2% Proof Stress KSI	Tensile Strength KSI	% Elongation 2in		Cast No.	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn				
22	551	23	219036	69.47	80.50	15		2G338	.10	.30	1.40	.08	2.30	.19		5.59				73

**Remarks** DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY  
CASE NO. D826

Certified that the whole of the supplies detailed hereon have been inspected, tested and unless otherwise stated, conform in all respects with the requirements of the contract or order. The quality control adopted in respect of these supplies are in accordance with the conditions of our BSEN ISO 9002 registration.

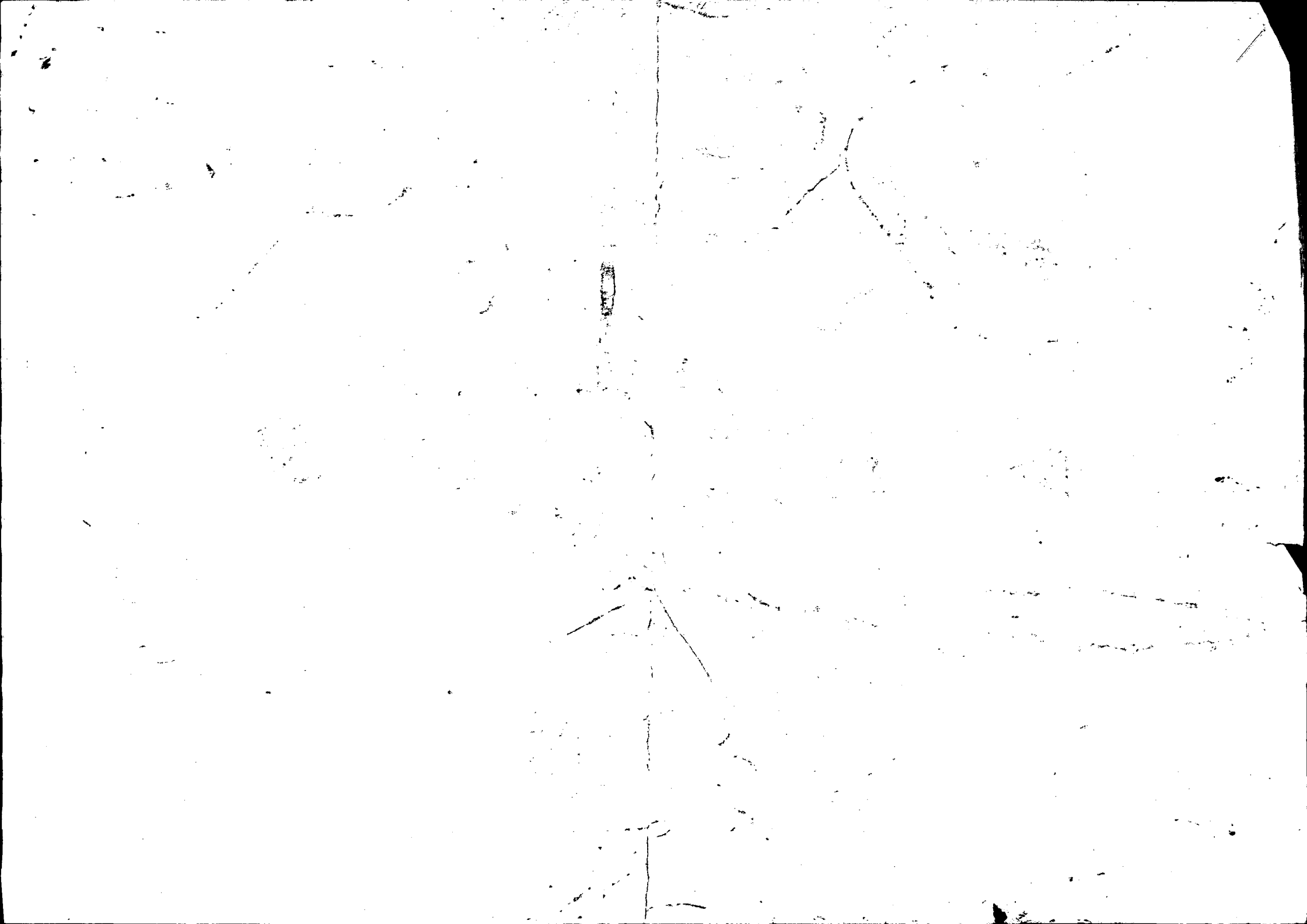
For and on behalf of BA Tubes Limited

Certified that, unless otherwise stated above the whole of the above-mentioned materials have been manufactured, tested and inspected in accordance with the terms of the contract order acceptable thereto and conform fully to the standard/specifications quoted hereon and the requirements of the Civil Aviation Authority

For and on behalf of BA Tubes Limited

Registered in England No. 3981395  
Registered Office: The Victoria, Harbour City, Salford Quays, Manchester M5 2SP, England.  
VAT Registration No. GB 668 2142 26

( THIS CERTIFICATE CONFORMS TO THE REQUIREMENTS OF EN 10204.3.1B )



DART AEROSPACE LTD		Work Order:	18980
Description: REMOVE PER NCR 656		Part Number:	D6010-115 (7) D6011-115 (1) D6007-106 (1)
Dwg:		Qty:	
		Page 1 of 1	

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller			
2	FINISHING	REMOVE THE FOLLOWING PARTS FROM QUARANTINE:	B	03.03.11	9
3		(7) D6010-115 B15989*			
4		(1) D6011-115 B15990*			
5		(1) D6007-106 B15998*			
6		*NOTE: PARTS WILL BE ASSIGNED A NEW B/N. PLEASE REFER TO THESE B/N FOR RECEIPT OF ORDER AND MATERIAL CERTIFICATION.			
7	FINISHING	ACID ETCH + ALUMINE INSIDE & OUTSIDE PER QSE 005 4.1	J	03.04.11	9
8	FINISHING	IDENTIFY WITH PIN & NEW B/N. & STOCK ATTACH NCR 656 TAB. WHICH SAYS THE FOLLOWING:	B	03.04.11	9
9		"SEE NCR 656.			
10		ULTRASONIC INSPECT AFTER TURNING.			
11		TALK TO DAVID SHEPHERD BEFORE MACHINING			
12	AC	COST / PART 124.25 ADJUST INVENTORY AS REQUIRED	SJC	03.04.11	—
13		<del>REVIEW</del>			
14	DC	CLOSE w/o INSPECT LEVEL 21	A	03.04.11	—
15					
16					
17					
18					
19					
20					

Rev	Date	Change	Revised By	Approved
A		New issue	B	03.03.11